



## SEQUENCE LISTING

<110> IKADAI, Hiromi et al.

<120> GENE ENCODING PROTEIN FROM MEROZOITE OF BABESIA CABALLI, RECOMBINANT PROTEIN OBTAINED WITH SAID GENE AND USE THEREOF

<130> 0020-4843P

<140> 09/807,459

<141> 2001-04-13

<160> 2

<170> PatentIn version 3.0

<210> 1

<211> 1828

<212> DNA

<213> Babesia caballi

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<221> CDS

<222> (39)..(1412)

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Val Gly Asp Val Thr Lys Thr Leu Leu Ala Ala Ser Glu Ser Val Asp
          10               15               20

tca gct gcc aat gcc tat atg atc aac agt gac atg agc gat tac ttg      152
Ser Ala Ala Asn Ala Tyr Met Ile Asn Ser Asp Met Ser Asp Tyr Leu
          25               30               35

tcg gct gtg tct gac aac ttc gcc gag cgc att tgc agt cag gtc cct      200
Ser Ala Val Ser Asp Asn Phe Ala Glu Arg Ile Cys Ser Gln Val Pro
          40               45               50

aag ggg agt aac tgc agt gct tcc gtt agc gca tac atg agt cgc tgc      248
Lys Gly Ser Asn Cys Ser Ala Ser Val Ser Ala Tyr Met Ser Arg Cys
          55               60               65               70

gct aaa cag gac tgc ctg act ctc caa agt ctt aag tac cct ctt gag      296
Ala Lys Gln Asp Cys Leu Thr Leu Gln Ser Leu Lys Tyr Pro Leu Glu
          75               80               85

gct aag tac caa ccg ctg acc ctt cct gac ccc tac cag ttg gag gcc      344
Ala Lys Tyr Gln Pro Leu Thr Leu Pro Asp Pro Tyr Gln Leu Glu Ala
          90               95               100
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gca ttt ata ctc ttc aag gag agt gac gct aat ccg gcc aat agc act	392
Ala Phe Ile Leu Phe Lys Glu Ser Asp Ala Asn Pro Ala Asn Ser Thr	
105 110 115	
gag aag cgc ttc tgg atg cgt ttc aga agg ggc aag aac cac agt tac	440
Glu Lys Arg Phe Trp Met Arg Phe Arg Arg Gly Lys Asn His Ser Tyr	
120 125 130	
ttc cac gac tta gtc ttc aat ctg ctg gag aag aac gtg act cgc gac	488
Phe His Asp Leu Val Phe Asn Leu Leu Glu Lys Asn Val Thr Arg Asp	
135 140 145 150	
gcg gat gct act gac att gag aac ttt gcg tcc agg tac ctg tac atg	536
Ala Asp Ala Thr Asp Ile Glu Asn Phe Ala Ser Arg Tyr Leu Tyr Met	
155 160 165	
gcc acg ctt tac tac aag acg tac acg aat gtt gat gag ttc ggt gct	584
Ala Thr Leu Tyr Tyr Lys Thr Tyr Thr Asn Val Asp Glu Phe Gly Ala	
170 175 180	
agc ttc ttt aac aag ttg tct ttc act act ggg ttg ttc ggc tgg ggc	632
Ser Phe Phe Asn Lys Leu Ser Phe Thr Thr Gly Leu Phe Gly Trp Gly	
185 190 195	
atc aag agg gca ctt aag cag att att cgc tct aac ctg ccc ctt gac	680
Ile Lys Arg Ala Leu Lys Gln Ile Ile Arg Ser Asn Leu Pro Leu Asp	
200 205 210	
atc ggg aca gaa cac agc gtc agt cgc ctg cag cac att acg agc agt	728
Ile Gly Thr Glu His Ser Val Ser Arg Leu Gln His Ile Thr Ser Ser	
215 220 225 230	
tac aag gat tac atg gat acg cag att cct gca ctg ccc aag ttt gcg	776
Tyr Lys Asp Tyr Met Asp Thr Gln Ile Pro Ala Leu Pro Lys Phe Ala	
235 240 245	
aag cgt ttc tcc ctt atg gta gtg cag agg ctg ctg gcc acc gtg gct	824
Lys Arg Phe Ser Leu Met Val Val Gln Arg Leu Leu Ala Thr Val Ala	
250 255 260	
ggt tac gtc gac acc ccg tgg tat aag aag tgg tac atg aag ctg aag	872
Gly Tyr Val Asp Thr Pro Trp Tyr Lys Lys Trp Tyr Met Lys Leu Lys	
265 270 275	
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Asn Phe Met Val Asn Arg Val Phe Ile Pro Thr Lys Lys Phe Phe Asn	
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Lys Glu Ile Arg Glu Pro Ser Lys Ala Leu Lys Glu Lys Val Ser Thr	
295 300 305 310	
gac acc aag gat tta ttc gag aac aaa att ggg cag ggt act gtg gac	1016
Asp Thr Lys Asp Leu Phe Glu Asn Lys Ile Gly Gln Gly Thr Val Asp	
315 320 325	

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ata aga aaa gtg tca acg ggg gcc gag gat tta ttc gag aac aaa att Ile Arg Lys Val Ser Thr Gly Ala Glu Asp Leu Phe Glu Asn Lys Ile 375 380 385 390	1208
ggg cag ggt act gtg gac ttc atc aat aac gaa att cgt gac cct agt Gly Gln Gly Thr Val Asp Phe Ile Asn Asn Glu Ile Arg Asp Pro Ser 395 400 405	1256
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aac aaa att ggg cag ggt act gtg gac ttc atc aat aag gaa att cgt Asn Lys Ile Gly Gln Gly Thr Val Asp Phe Ile Asn Lys Glu Ile Arg 425 430 435	1352
gac cct agt aag gca tta ata aga aaa gtg tct acc gag gcc gat aat Asp Pro Ser Lys Ala Leu Ile Arg Lys Val Ser Thr Glu Ala Asp Asn 440 445 450	1400
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